This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims

1-7. (canceled)

8. (currently amended) A recombinant DNA molecule comprising an isolated ~~avian~~ lysozyme gene expression control region operably linked to a nucleic acid insert encoding a heterologous polypeptide, wherein the lysozyme gene expression control region comprises:

(a) at least one 5' matrix attachment region;
(b) an intrinsically curved DNA region;
(c) at least one transcription enhancer;
(d) negative regulatory element;
(e) at least one hormone responsive element;
(f) at least one avian CR1 repeat element; and
(g) a proximal lysozyme promoter and signal peptide-encoding region,

wherein each of elements (a)-(g) is obtained from a chicken and wherein said lysozyme gene expression control region directs expression of said nucleic acid insert in chicken oviduct cells.

9-10. (canceled)

11. (currently amended) ~~The~~ A recombinant DNA molecule ~~of Claim 8, wherein the~~ comprising a lysozyme gene expression control region ~~comprises~~ comprising (1) the ~~nucleic acid~~ nucleotide sequence ~~in~~ of SEQ ID NO: 67, or a ~~degenerate variant thereof~~ nucleotide sequence that hybridizes under highly stringent conditions to the nucleotide sequence of SEQ ID NO: 67 or its complement; and (2) at least the following elements:

(a) at least one 5' matrix attachment region;
(b) an intrinsically curved DNA region;
(c) at least one transcription enhancer;
(d) negative regulatory element;
(e) at least one hormone responsive element;
(f) at least one avian CR1 repeat element; and
(g) a proximal lysozyme promoter and signal peptide-encoding region,

wherein the lysozyme gene expression control region is operably linked to a nucleic acid insert encoding a heterologous polypeptide and directs expression of said nucleic acid insert in chicken oviduct cells.

12. (currently amended) The recombinant DNA molecule of Claim 8 or 11, ~~further comprising~~ which comprises a polyadenylation signal sequence.

13. (original) The recombinant DNA molecule of Claim 12, wherein the polyadenylation signal sequence is derived from the SV40 virus.

14. (currently amended) The recombinant DNA molecule of Claim 12, wherein the polyadenylation signal sequence comprises the ~~nucleic acid~~ nucleotide sequence ~~in~~ of SEQ ID NO: 68, or a ~~degenerate variant thereof~~ nucleotide sequence that hybridizes under highly stringent conditions to the nucleotide sequence of SEQ ID NO: 68, or its complement.

15. (currently amended) The recombinant DNA molecule of Claim 8 or 11, wherein the nucleic acid insert encoding a heterologous polypeptide has ~~a codon complement~~ one or more codons optimized for protein expression in an avian.

16. (original) The recombinant DNA molecule of Claim 8, wherein the nucleic acid insert encodes an interferon α2b polypeptide.

17. (currently amended) The recombinant DNA molecule of Claim 16, wherein the nucleic acid insert encoding an interferon α2b polypeptide comprises the nucleotide sequence ~~in~~ of SEQ ID NO: 66, or a ~~degenerate variant thereof~~ nucleotide sequence that encodes the polypeptide encoded by SEQ ID NO:66.

18. (currently amended) The recombinant DNA molecule of Claim 8 ~~having~~ comprising the nucleotide sequence ~~in~~ of SEQ ID NO: 65, or a ~~degenerate variant thereof~~ nucleotide sequence that hybridizes under highly stringent conditions to the nucleotide sequence of SEQ ID NO: 65, or its complement.

19. (currently amended) The recombinant DNA molecule of Claim 8 or 11 ~~further~~ comprising an origin of replication selected from a bacterial origin of replication or a viral origin of replication.

20. (currently amended) The recombinant DNA molecule of Claim 19, wherein the recombinant DNA molecule is a plasmid vector.

21. (currently amended) The recombinant DNA molecule of Claim 19, wherein the recombinant DNA molecule is a ~~virus~~ viral vector.

22. (currently amended) An expression vector that integrates into a host cell, said expression vector ~~and~~ comprising an isolated ~~avian~~ lysozyme gene expression control region operably linked to a nucleic acid insert encoding a heterologous polypeptide, wherein the expression control region directs production of a transcript in chicken oviduct cells, wherein the lysozyme gene expression control region comprises:

(a) at least one 5' matrix attachment region;
(b) an intrinsically curved DNA region;
(c) at least one transcription enhancer;
(d) a negative regulatory element;
(e) at least one hormone responsive element;
(f) at least one avian CR1 repeat element; and
(g) a proximal lysozyme promoter and signal peptide-encoding region,

wherein each of elements (a)-(g) is obtained from chicken.

23-24. (canceled)

25. (currently amended) ~~The~~ An expression vector ~~of Claim 22,~~ that integrates into a host cell, said expression vector comprising a ~~and wherein the~~ lysozyme gene expression control region ~~comprises~~ comprising the ~~nucleic acid~~ nucleotide sequence ~~in~~ of SEQ ID NO: 67, or a ~~degenerate variant thereof~~ nucleotide sequence that hybridizes under highly stringent conditions to the complement of SEQ ID NO: 67, wherein the lysozyme gene expression control region (1) is operably linked to a nucleic acid insert encoding a heterologous polypeptide, (2) directs expression of said nucleic acid insert in chicken oviduct cells, and (3) comprises:

(a) at least one 5' matrix attachment region;
(b) an intrinsically curved DNA region;
(c) at least one transcription enhancer;
(d) negative regulatory element;
(e) at least one hormone responsive element;
(f) at least one avian CR1 repeat element; and
(g) a proximal lysozyme promoter and signal peptide-encoding region.

26. (currently amended) The expression vector of Claim 22 or 25, ~~further~~ comprising a polyadenylation signal sequence.

27. (currently amended) The expression vector of Claim ~~25~~ 26, wherein the polyadenylation signal sequence is derived from the SV40 virus.

28. (currently amended) The expression vector of Claim ~~25~~ 26, wherein the polyadenylation signal sequence comprises the ~~nucleic acid~~ nucleotide sequence ~~in~~ of SEQ ID NO: 68, or a ~~degenerate variant thereof~~ nucleotide sequence that hybridizes under highly stringent conditions to the nucleotide sequence of SEQ ID NO: 68, or its complement.

29. (currently amended) The expression vector of Claim 22 or 25, wherein the nucleic acid insert has one or more codons optimized for protein expression in an avian.

30. (original) The expression vector of Claim 22, wherein the nucleic acid insert encodes an interferon α2b polypeptide.

31. (currently amended) The expression vector of Claim 30, wherein the nucleic acid insert encoding an interferon α2b polypeptide comprises the nucleotide sequence ~~in~~ of SEQ ID NO: 66, or a ~~degenerate variant thereof~~ nucleotide sequence that encodes the polypeptide encoded by SEQ ID NO:66.

32. (currently amended) The expression vector of Claim 22 ~~having~~ comprising the nucleotide sequence ~~in~~ of SEQ ID NO: 65, or a ~~degenerate variant thereof~~ nucleotide sequence that hybridizes under highly stringent conditions to the nucleotide sequence of SEQ ID NO: 65, or its complement.

33. (currently amended) The expression vector of Claim 22 or 25, wherein the expression vector is selected from the group consisting of a plasmid vector and a ~~virus~~ viral vector.

34-36. (canceled)

37. (currently amended) ~~A~~ An isolated eukaryotic cell ~~transformed with the expression vector according to Claim 22, or a progeny of the cell,~~ comprising a nucleic acid comprising a lysozyme gene expression control region operably linked to a nucleic acid insert encoding a heterologous polypeptide, wherein the lysozyme gene expression control region directs production of a transcript in chicken oviduct cells, wherein the lysozyme gene expression control region comprises:

(a) at least one 5' matrix attachment region;
(b) an intrinsically curved DNA region;
(c) at least one transcription enhancer;
(d) a negative regulatory element;
(e) at least one hormone responsive element;
(f) at least one avian CR1 repeat element; and
(g) a proximal lysozyme promoter and signal peptide-encoding region,

wherein each of elements (a)-(g) is obtained from chicken, and wherein the cell ~~or the progeny thereof~~ expresses ~~a~~ the heterologous polypeptide.

38. (original) The eukaryotic cell of Claim 37, wherein the cell is an avian cell.

39. (original) The eukaryotic cell of Claim 37, wherein the cell is a chicken cell.

40. (canceled)

41. (original) The eukaryotic cell of Claim 37, wherein the cell is a cultured cell.

42. (currently amended) The eukaryotic cell of Claim 37, ~~wherein the expression vector has a nucleic acid insert encoding a polypeptide, and~~ wherein the nucleic acid insert has ~~a codon complement~~ one or more codons optimized for protein expression in an avian.

43. (original) The eukaryotic cell of Claim 37, wherein the nucleic acid insert encodes an interferon α2b polypeptide.

44. (currently amended) The eukaryotic cell of Claim ~~37~~ 43, wherein the nucleic acid insert encoding ~~the~~ an interferon α2b polypeptide comprises the nucleotide sequence ~~in~~ of SEQ ID NO: 66, or a ~~degenerate variant thereof~~ nucleotide sequence that encodes the polypeptide encoded by SEQ ID NO:66.

45-58. (canceled)

59. (currently amended) The isolated nucleic acid of Claim ~~58~~ 15, wherein the avian is a chicken.

60. (original) The isolated nucleic acid of Claim 59, wherein the nucleic acid insert encodes an interferon α2b polypeptide.

61. (currently amended) The isolated DNA molecule of Claim 60, wherein the nucleic acid insert encoding ~~the~~ an interferon α2b polypeptide comprises the nucleotide sequence ~~in~~ of SEQ ID NO: 66, or a ~~degenerate variant thereof~~ nucleotide sequence that hybridizes under highly stringent conditions to the nucleotide sequence of SEQ ID NO: 66, or its complement.

62. (new) An isolated eukaryotic cell comprising a lysozyme gene expression control region comprising the nucleotide sequence of SEQ ID NO: 67, or a nucleotide sequence that hybridizes under highly stringent conditions to the complement of SEQ ID NO: 67, wherein the lysozyme gene expression control region (1) is operably linked to a nucleic acid insert encoding a heterologous polypeptide, (2) directs expression of said nucleic acid insert in chicken oviduct cells, and (3) comprises:

(a) at least one 5' matrix attachment region;
(b) an intrinsically curved DNA region;
(c) at least one transcription enhancer;
(d) negative regulatory element;
(e) at least one hormone responsive element;
(f) at least one avian CR1 repeat element; and
(g) a proximal lysozyme promoter and signal peptide-encoding region.

63. (new) The eukaryotic cell of Claim 62, wherein the cell is an avian cell.

64. (new) The eukaryotic cell of Claim 62, wherein the cell is a chicken cell.

65. (new) The eukaryotic cell of Claim 62, wherein the cell is a cultured cell.

66. (new) The eukaryotic cell of Claim 62, wherein the nucleic acid insert has one or more codons optimized for protein expression in an avian.

67. (new) The eukaryotic cell of Claim 62, wherein the nucleic acid insert encodes an interferon α2b polypeptide.

68. (new) The eukaryotic cell of Claim 67, wherein the nucleic acid insert encoding an interferon α2b polypeptide comprises the nucleotide sequence of SEQ ID NO: 66, or a nucleotide sequence that encodes the polypeptide encoded by SEQ ID NO:66.

69. (new) The eukaryotic cell of Claim 37 or 62, wherein the cell is a chicken oviduct cell.